

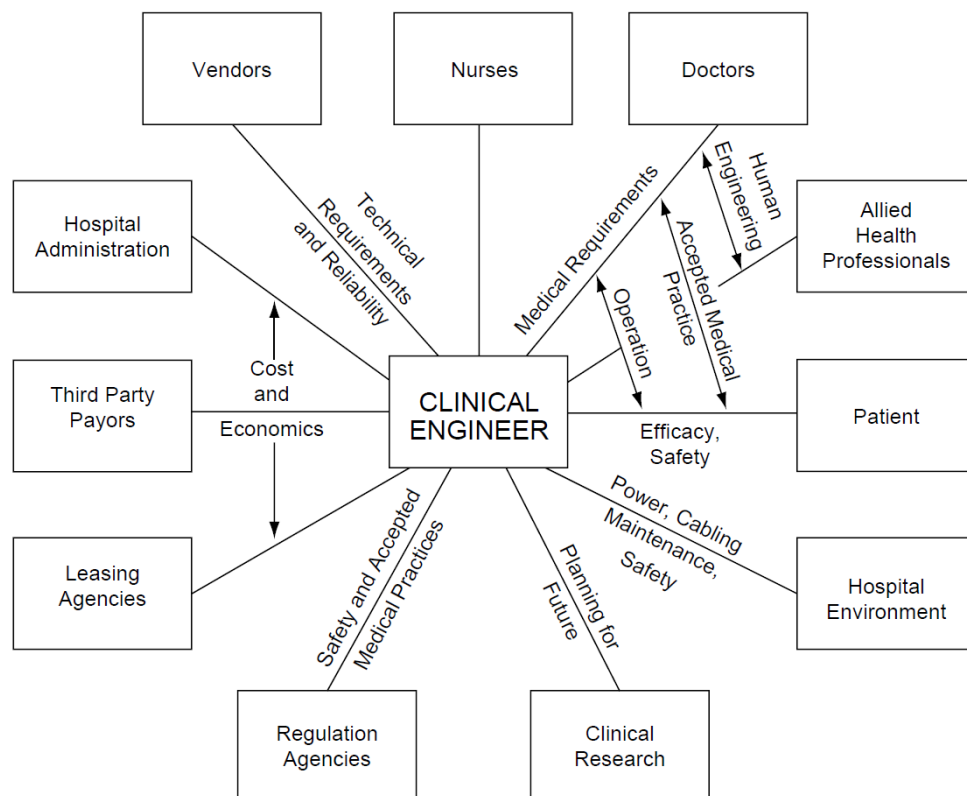
UNIT – I

INTRODUCTION

Clinical engineering: Definition, Evolution, Role, Responsibilities, Functional status, History of clinical engineering and Technology in Health Care System, Enhancing patient safety

ROLE AND RESPONSIBILITY OF CLINICAL ENGINEER WITHIN HOSPITAL ORGANIZATION:

Clinical Engineers are an integral part of health care delivery team. Their role is multifaced. The following figure illustrate the role played by clinical Engineers.



- They must successfully interface with clinical staff, hospital administration and regulatory agencies to ensure equipment safety.
- Supervise hospital clinical engineering department which has technicians.
- Evaluation and planning for new medical technology
- Design, modification and repair of medical instrument or system
- Cost-effective management of a medical equipment calibration and repair service

- Safety and performance testing of medical equipment by BMETs (biomedical equipment technician)
- Inspection of all incoming equipment (new and returning repairs)
- Coordination of outside services and vendors
- Training of medical personnel in the safe and effective use of medical devices and systems
- Clinical applications engineering, such as custom modification of medical devices for clinical research
- Biomedical computer support
- Input to the design of clinical facilities where medical technology is used (e.g., operating rooms or ICU).
- Development and implementation of documentation protocols required by external accreditation and licensing agencies

management organization within hospitals has evolved structure as the “triad model.” The three primary components are the governing board (trustees), hospital administration (CEO and administrative staff), and the medical staff organization.